



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,892	03/31/2004	Peter N. Comley	38190/274036	5765
826	7590	08/08/2006	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			BEVERIDGE, RACHEL E	
		ART UNIT	PAPER NUMBER	
			1725	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action Before the Filing of an Appeal Brief</b>	Application No.	Applicant(s)
	10/813,892	COMLEY ET AL.
	Examiner Rachel E. Beveridge	Art Unit 1725

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 August 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a)  The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

- (a)  They raise new issues that would require further consideration and/or search (see NOTE below);
- (b)  They raise the issue of new matter (see NOTE below);
- (c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d)  They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see continuation sheet.

12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.

13.  Other: \_\_\_\_\_.

reb

**CONTINUATION OF ITEM 11**

***Response to Arguments***

Applicant's arguments filed August 1, 2006 have been fully considered but they are not persuasive.

Applicant argues that none of the references cited disclose a method of superplastic forming a refined-grain titanium blank at a temperature of less than 1450°F with respect to claim 1 (page 2). The examiner disagrees. Weisert discloses superplastically forming titanium alloys and further includes Ti-6Al-4V as an example of such an alloy, which applicant continually refers to with respect to the instant refined-grain titanium blank. Furthermore, Weisert discloses about 1450°F; the language of "about 1450°F" disclosed by Weisert necessarily encompasses temperatures below 1450°F. Applicant has not overcome the obviousness rejection and has not shown the criticality of the claimed range in order to overcome the obviousness rejection.

Applicant argues that Froes does not disclose the claimed grain size (page 2), further arguing that one skilled in the art would not have expected the fine-grain material of the blank of claim 1 to have the same properties as the materials disclosed by Froes et al. and that one skilled in the art would have expected the fine-grain material of the blank of claim 1 to be characterized by forming and bonding temperatures and forming strain rates that are different than the properties of the materials disclosed by Froes et al. (page 3). The examiner disagrees. Both Weisert and Froes disclose superplastic forming of titanium alloys including Ti-6Al-4V. Also, Weisert discloses about 1450°F, which encompasses the applicant's instantly claimed temperature range as discussed

about. Therefore, it is necessarily present that the claimed titanium blank will have the same properties as the materials disclosed by Weisert and Froes.

Applicant argues the characterization and reliance on *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) and asserts that the Federal Circuit has held that “the disclosure of a range... does not constitute a specific disclosure of the endpoints of that range.” *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991 (Fed. Cir. 2006), 1000 (pages 3-5). The examiner notes that the *Atofina* case is not controlling case law in this matter; rather, the *Titanium Metals Corp.* is the controlling case law with regard to the rejection and arguments of the instant case.

The applicant also argues that the deficiency of Weisert is not cured by Froes or the other cited references, and the applicant submits that independent claims 1, 16, and 36 are allowable, as well as the corresponding dependent claims (page 5). The examiner disagrees and reminds applicant that the obviousness rejection has not been overcome by applicant’s allegations, and the applicant has not shown the criticality of the claimed ranges being argued in order to distinguish from the prior art and overcome the obviousness rejection.

Applicant argues that it would not have been obvious to use the thin sheets of rapidly-solidified foil of Froes to form a structure having varying mass distribution as disclosed by Weisert, and further states that both Weisert and Froes do not disclose surface contouring for achieving mass distribution by rapidly-solidified foil that is about 10 to 100 millionths of an inch thick (page 6). The examiner disagrees and points out that the features upon which applicant relies (i.e., surface contouring for achieving mass

distribution by rapidly-solidified foil that is about 10 to 100 millionths of an inch thick) are not recited in the rejected claim(s) (particularly independent claims 1, 16, and 36). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). With further regard to this subject, the applicant argues that this is the reason Weisert and Froes cannot be properly combined (page 6). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Weisert to include the grain size restraints of Froes in order to permit fabrication of airframe and engine structures with significant cost and weight reduction (Froes, col. 2, lines 6-8).

Applicant argues that the suggestion that a patent's specific teaching away from a feature can be disregarded, and reminded the examiner that the Court of Appeals for the Federal Circuit has held that prior art reference should be considered as a whole and portions teaching away from the claimed invention must be considered (pages 6-7). The examiner agrees with the applicant with regard to this matter but also reminds the

applicant that a reference is relevant for all it contains, and a reference's disclosure of a particular claimed features in order to teach away from it, it is still recognized as relevant prior art. Furthermore, the MPEP states, "patents are relevant as prior art for all they contain," more specifically stating,

"The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed.") MPEP 2123 I.

Applicant argues that dependent claims 4, 17, and 37 recite that the blank has a grain size of about 1 micron and the office action has not identified any reference disclosing the feature (page 7). The examiner disagrees and reminds the applicant of Froes disclosure of about 2-20 microns. The examiner reminds the applicant that the language of "about 2 microns" of the prior art and "about 1.2" or "about 1" of the instant invention are broadly stated and therefore it remains the examiner's position that the amounts in question are so close that is it *prima facie* obvious that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. v. Banner*, 227 USPQ 773. Furthermore, the applicant has not overcome the obviousness rejection by alleging that the instantly claimed ranges lead to significant differences from

the prior art, and the applicant has not shown the criticality of these ranges with respect to the properties in order to overcome the obviousness rejection over the prior art of record.

Applicant also argues that it is not necessarily present to arrive at the specified strain rates of claims 11 and 12, since "a higher strain rate would require higher pressure and/or result in higher stresses, it would not have been obvious to achieve the claimed strain rates using conventional materials, such as those used in the prior art references (pages 7-8). The examiner disagrees, and once again reminds the applicant that both Weisert and Froes disclose titanium alloys and specifically disclose Ti-6Al-4V.

The applicant argues in connection with claim 1 that none of the cited references disclose the features of forming an alpha case oxide layer that is less than about 0.001 inch thick during superplastic forming and removing the layer by pickling (page 9). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., forming an alpha case oxide layer that is less than about 0.001 inch thick during superplastic forming and removing the layer by pickling (specifically in claim 1)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, with respect to the argument against the rejection of claim 16 (page 9), the examiner disagrees and reminds the applicant that Stacher discloses titanium's propensity to form oxide layers and further discloses pickling the surface; therefore, in combination with

Weisert and Froes the process is carried out with reasonable motivation under the same conditions and it is obvious to arrive at the claimed invention in order to significantly lower the cost, difficulty, and time involved in diffusion bonding and superplastic forming titanium alloy structures (Stacher, col. 3, lines 30-36).

Applicant argues that the references do not disclose the features of claims 18 and 19 (page 10). The examiner disagrees. The examiner again reminds the applicant that the same pickling process is carried out on titanium blanks (the same properties); therefore, it necessary removes the specified amount of oxide at the specified rate. Furthermore, the applicant has not overcome the obviousness rejection by alleging that the claim limitations are not met by the prior art. The applicant has not shown the criticality of the claimed process properties in order to overcome the obviousness rejection.

The applicant then argues that the prior art does not disclose the superplastic formation at a temperature of "about 1425°F" (page 10). The examiner disagrees. Once again the examiner reminds the applicant that Weisert discloses superplastically forming titanium alloys and further includes Ti-6Al-4V as an example of such an alloy, which applicant continually refers to with respect to the instant refined-grain titanium blank. Furthermore, Weisert discloses about 1450°F; the language of "about 1450°F" disclosed by Weisert necessarily encompasses applicant's language of "about 1425°F." Applicant has not overcome the obviousness rejection and has not shown the criticality of the claimed range in order to overcome the obviousness rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel E. Beveridge whose telephone number is 571-272-5169. The examiner can normally be reached on Monday through Friday, 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**JONATHAN JOHNSON  
PRIMARY EXAMINER**

reb  
August 3, 2006